

WHAT IS CLAIMED IS:

1. An isolated peptide selected from the group consisting of:

- (a) a peptide set forth in Table 2
5 (b) a derivative of the peptide in (a); and
(c) a propeptide set forth in Table 1.

2. The isolated peptide of claim 1, wherein Xaa₁ is Lys, Xaa₂ is Tyr, Xaa₃ is Glu and Xaa₅ is Trp.

3. An isolated nucleic acid encoding an ω -conopeptide propeptide having an amino acid sequence set forth in Table 1.

4. The isolated nucleic acid of claim 3, wherein the nucleic acid comprises a nucleotide sequence set forth in Table 1.

5. An isolated conopeptide propeptide having an amino acid sequence set forth in Table 1.

6. A method for treating or preventing disorders associated with voltage gated ion channel disorders in which comprises administering to a patient in need thereof a therapeutically effective amount of an active agent selected from the group consisting of peptides (a) and (b) of claim 1 or a pharmaceutically acceptable salt thereof.

7. The method of claim 6, wherein said disorder is a neurologic disorder.

8. The method of claim 7, wherein said neurologic disorder is a seizure.

9. The method of claim 8, wherein said seizure is associated with epilepsy.

30 10. The method of claim 7, wherein said neurologic disorder is a neurotoxic injury associated with conditions of hypoxia, anoxia or ischemia.

11. The method of claim 10, wherein said neurotoxic injury is associated with stroke, cerebrovascular accident, brain or spinal cord trauma, myocardial infarct, physical trauma, drownings, suffocation, perinatal asphyxia, or hypoglycemic events.
- 5 12. The method of claim 6, wherein said disorder is pain.
13. The method of claim 12, wherein said pain is migraine, acute pain, persistent pain, neuropathic pain or nociceptive pain.
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- 10 14. The method of claim 6, wherein said disorder is inflammation.
15. The method of claim 6, wherein said disorder is a cardiovascular disorder.

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